

# PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 141455

Date: October 4, 1978

Title: Both Diesel Generators Inoperable Simultaneously at Rancho Seco

The failure sequence was:

1. While one diesel generator was out of service for maintenance, the second diesel generator was started and paralleled with the nuclear service bus, as required.
2. While the diesel was running, fuel oil began to spray from a loose packing, which could not be tightened while the diesel was in operation.
3. The second diesel was shut down for repair.

Corrective action;

1. The running diesel was shut down to repair the packing gland. The reactor was shut down as required. The packing gland was repaired, the diesel generator restarted, and the plant returned to power.

Design purpose of failed system or component:

1. The failed component provides removal of foreign matter from diesel generator fuel oil.

Unavailability of system per WASH 1400:\* emergency power:  $10^{-2}/D$

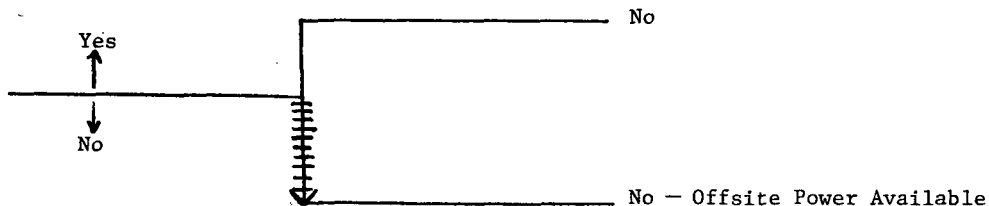
Unavailability of component per WASH 1400:\* individual diesel generator:  
 $3 \times 10^{-2}/D$

---

\* Unavailabilities are in units of per demand  $D^{-1}$ . Failure rates are in units of per hour  $HR^{-1}$ .

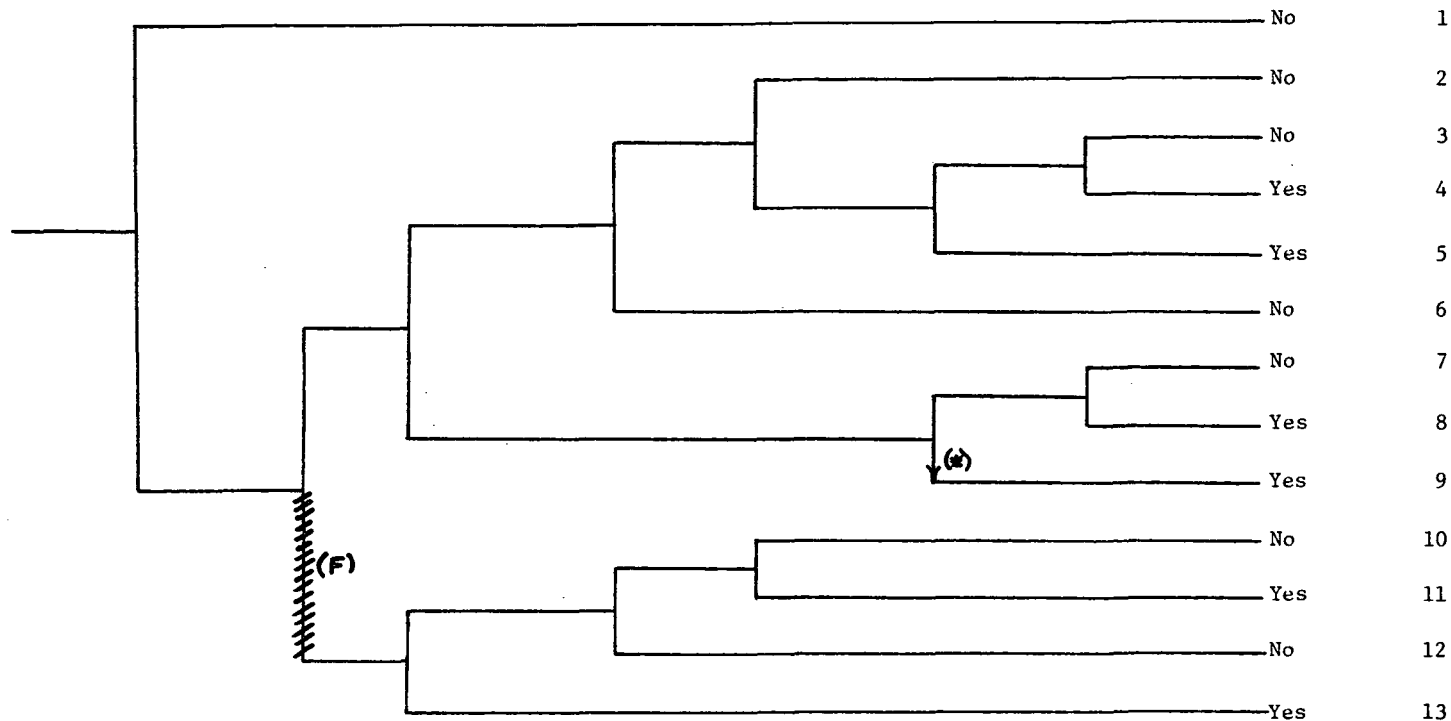
Diesel generator B out of service with reactor at power, diesel generator A running	Diesel generator A remains operable
---	--

Potential  
severe core  
damage



NSIC 141455 - Actual Sequence for Both Diesel Generators  
Inoperable Simultaneously at Rancho Seco

Loss of Offsite Power	Turbine Generator Runs Back and Assumes House Loads	Emergency Power	Auxiliary Feedwater and Secondary Heat Removal	PORV Demanded	PORV or PORV Isolation Valve Closure	High Pressure Injection	Long Term Core Cooling	Potential Severe Core Damage	Sequence No.
-----------------------	---	-----------------	--	---------------	--------------------------------------	-------------------------	------------------------	------------------------------	--------------



NSIC 141455 - Sequence of Interest for Both Diesel Generators Inoperable Simultaneously at Rancho Seco

\* Not included in mitigation procedures.

# CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 141455

DATE OF LER: October 17, 1978

DATE OF EVENT: October 4, 1978

SYSTEM INVOLVED: Emergency electric power

COMPONENT INVOLVED: Packing gland - diesel generators

CAUSE: Loose packing gland on fuel oil strainer.

SEQUENCE OF INTEREST: Loss of offsite power.

ACTUAL OCCURRENCE: 1 DG out of service - loose gland resulted in oil spray of fuel oil from second

REACTOR NAME: Rancho Seco

DOCKET NUMBER: 50-312

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 918 MWe

REACTOR AGE: 4.2 yr

VENDOR: B&W

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Sacramento Municipal Utility District

LOCATION: 25 miles SE of Sacramento, Ca.

DURATION: .9 hours

PLANT OPERATING CONDITION: 100% power.

SAFETY FEATURE TYPE OF FAILURE: (a) inadequate performance; (b) failed to start;  
(c) made inoperable; (d) \_\_\_\_\_

DISCOVERY METHOD: Operational event

COMMENT: 1 DG was being serviced. Loose packing gland on fuel oil strainer caused fuel oil to spray out. Location of strainer prevented tightening gland with diesel running. DG was shut down to tighten gland.